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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,240	05/24/2001	Troy M. Herndon	8032943	3955

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EXAMINER

NGUYEN, TRAN N

ART UNIT PAPER NUMBER

2834

DATE MAILED: 12/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/865,240

Applicant(s)

HERNDON ET AL.

Examiner

Tran N. Nguyen

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 06 January 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

The corrected or substitute drawings were received on 1/6/03. The Examiner of the record approves these drawings.

Claim Rejections - 35 USC § 112

Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, “adapted to have the coating scraped ” is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138. Thus, the term “adapted to” is suggested to be deleted from claim 1.

In claim 5, “the stack laminations” and “the stator stack” lack antecedent basis.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 1-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kitahara et al (US 4760298)** in view of **Getschmann (US 6265802)** and **Aiello et al (US 5965966)**.

Kitahara discloses a spindle motor (figs 1-2) comprising a shaft (31) and a hub (12a) rotating over the shaft supported by a bearing (37-38) for rotation relative to the shaft, the hub supporting a magnet (17) radially aligned with a stator supported from an outer surface of the

shaft, the stator comprising a plurality of laminations (6) forming a laminated stack having a circular inner yoke having an inner diameter sized to form an interference fit with a surface within the motor; wherein the motor shaft has (31) having an outer surface which is provided an upright portion of a base of the housing (fig 1), and the upright portion having a lower large-diameter shoulder portion (32) at the base of the center shaft (31) at which the stator core (6) is axially located and rested by being in contact with the shoulder portion (32) of the shaft.

Kitahara substantially discloses the claimed invention, except for the following limitations:

(A) the stator laminations having a circular inner yoke comprising a plurality of lamination features extending radially inward from the inner diameter of the yoke, the lamination features is provided so that the coating scraped from the surface of the features by interference fit with an outer surface over which the stack is located, thereby rigidly establishing an axial, radial and circumferential location of the stator relative to the shaft while grounding the stator to the shaft or base of the motor;

(B) the laminated features are generally semicircular in cross section.

Regarding the limitations of subsection (A), Getschmann, however, teaches a laminated core having a plurality of lamination features extending radially inward from the inner diameter of the yoke, the lamination features (58) are provided so that the features enable an interference-fit between the laminated core and the shaft. According to Getschmann, this would rigidly establish an axial, radial and circumferential location of the stator relative to the shaft.

Furthermore, Aiello also teaches a stator structure having a coating laminated core, wherein the stator structure includes an incorporated clip ring component (200) with electrical

grounding means (202, 204, 206). Because the stator is normally encapsulated in an insulating coating, the electrical grounding means (202, 204, 206) are formed sufficiently sharp so that they sharply scrap against the surface of the stator with sufficient force to cut through the coating of the stator laminated core to provide an electrical means for grounding the stator stack to the shaft (120) of the motor.

Those skilled in the art would realize that, *the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.* See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In this instant case, those skilled in the art would understand the following:

Regarding the Getschmann ref, *the most important teaching thereof is to provide the laminated core that is pressed fitted to the shaft with a plurality of lamination features extending radially inward from the inner diameter of the yoke so that these laminated features ensure an interference-fit between the laminated core and the shaft for rigidly establishing an axial, radial and circumferential location of the stator relative to the shaft.*

Regarding the Aiello ref, *the most important teaching thereof is to provide a plurality of electrical grounding means (202, 204, 206) to the stator laminated core, wherein the electrical grounding means are formed so sufficiently sharp that they sharply scrap against the surface of a coating stator with a sufficient force to cut through the coating thereof to establish electrical conductive means for grounding the stator stack to the shaft of the motor.*

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the stator core of Kitahara as following:

(a) by providing with a plurality of lamination features extending radially inward from the inner diameter of the yoke so that these laminated features ensure an interference-fit between the laminated core and the shaft for rigidly establishing an axial, radial and circumferential location of the stator relative to the shaft, *as taught by Getschmann*, because this would rigidly establishing an interference fit that ensure axial, radial and circumferential location of the stator relative to the shaft;

also,

(b) by configuring the stator stack with plurality of lamination features extending radially inward from the inner diameter of the stator yoke, *again as taught by Getschmann*, wherein the laminated features are modified to be so sufficiently sharp that they sharply scrap against the surface of a coating stator with a sufficient force to cut through the coating thereof to establish electrical conductive means for grounding the stator stack to the shaft of the motor, *as taught by Aiello*, because this would not only provide means to establish firm inference fit between the stator stack and the shaft but also enable the laminated features to function as electrical grounding means for grounding the stator stack to the shaft of the motor, *as a combined teaching of both Getschmann and Aiello*.

Regarding the laminated features are generally semicircular in cross section, as recited in claim 7, Aiello teaches that the laminated features should formed as sharp configurations, thus, it , it would have been obvious to one skilled in the art at the time the invention was made to modify the laminated features which function as electrical grounding means with a semicircular cross-section, as in claim 7, or any shape or size for that matter, as long as the selected shape/size having sharp surface to scrap the coating of the stator. This is obvious

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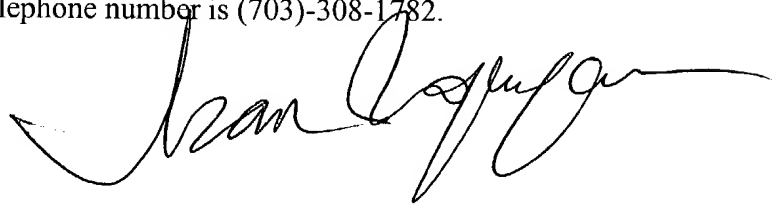
engineering design choice because a change in size or shape is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955) (emphasis added).

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N Nguyen whose telephone number is (703) 308-1639. The examiner can normally be reached on M-F 6:00AM-2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703)-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)-395-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-1782.

A handwritten signature in black ink, appearing to read 'Tran Nguyen', with a stylized, flowing script.

**TRAN NGUYEN
PRIMARY EXAMINER**